1. (currently amended): A process of producing fermentation product comprising the steps of,

(i) forming an acidified suspension of particulate plant derived material comprising a first polysaccharide which is more readily hydrolysable and a second polysaccharide which is more difficult to hydrolyse,

(ii) allowing the first polysaccharide to undergo hydrolysis by action of ~~the~~ an acid at a temperature of at least 50°C under conditions such that the first polysaccharide is hydrolysed and thereby forming a mixture of an aqueous liquor containing dissolved sugar and a solid residue containing the second polysaccharide,

(iii) subjecting the mixture to one or more separation stages in which the solid residue and aqueous sugar liquor are substantially separated from each other,

(iv) optionally washing the residue substantially free of acid and sugar,

(v) adjusting the pH of the aqueous liquor to at least 4,

(vi) passing the aqueous liquor from step (iv) into a fermentation stage where the dissolved sugars are acted upon by a microorganism in a fermentation broth to produce a fermentation product,

(vii) contacting the second polysaccharide by an enzyme, said enzyme hydrolyses the second polysaccharide to the component sugars, and allowing the component sugars to be acted upon by a microorganism in the fermentation broth to produce the fermentation product,

(viii) separating the fermentation product from the broth,

characterised in that the separation stage(s) in step (iii) is/are assisted by flocculation of the solid by-product, employing one or more flocculating agent(s) selected from the group consisting of water-soluble polymers, water-swellable polymers and charged microparticulate material.

2. (original): A process according to claim 1 in which the solid residue of step (iv) comprising the second polysaccharide is divided into a main stream and a secondary stream, and passing the main stream directly into the fermentation stage,

wherein the secondary stream of polysaccharide residue is passed into an enzyme production stage, in which enzyme is generated by allowing fungi to act on the polysaccharide residue, resulting in the formation of enzyme and sugars resulting from the second polysaccharide contained within the secondary stream,

then passing the enzyme and sugars of step (vi) into the fermentation stage,
wherein the enzyme acts on the second polysaccharide in the fermentation vessel and hydrolyses the second polysaccharide to the component sugars.

3. (original): A process according to claim 1 in which the solid residue of step (iv) comprising the second polysaccharide is passed to an enzyme treatment stage in which enzyme is generated by allowing fungi to grow on the polysaccharide and said enzyme hydrolyses the polysaccharide into the component sugars and then passing the resulting sugars into the fermentation stage in which the sugars are converted into the fermentation product.

4. (currently amended):A process according to ~~any of claims~~ claim 1 ~~to 3~~ in which the plant derived material comprises materials selected from the group consisting of herbaceous biomass, softwood biomass, hardwood biomass, sewage sludge, paper mill sludge and the biomass fraction of municipal solid waste.

5. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 4~~ in which the plant derived material is cellulosic and comprises hemicellulose as the first polysaccharide and cellulose as the second polysaccharide.

6. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 5~~ in which the acid has a pKa of below 4 and has a concentration up to 2% by weight.

7. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 6~~ in which the acid is selected from the group consisting of sulphuric acid and hydrochloric acid.

8. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 7~~ in which the hydrolysis of the first polysaccharide is conducted at a temperature of between 120 to 220°C for a period of from 1 minute to 15 minutes.

9. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 8~~ in which the flocculating agent is selected from the group consisting of water soluble or water swellable natural, semi-natural and synthetic polymers.

10. (original): A process according to claim 9 in which the polymer is formed from a water soluble monomer or blend of monomers.

11. (original): A process according to claim 9 in which the polymer is selected from the group consisting of polyacrylate salts, polyacrylamide, copolymers of acrylamide with (meth) acrylic acid or salts thereof, copolymers of acrylamide with dialkylaminoalkyl (meth) acrylate or acid addition or quaternary ammonium salts, polymers of diallyldimethyl ammonium chloride, polyamines and polyethylene imines.

12. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 11~~ in which the flocculating agent is a charged microparticulate material.

13. (original): A process according to claim 12 in which the charged microparticulate material is selected from the group consisting of swellable clays, anionic, cationic or amphoteric microparticulate silica based materials and organic cross-linked polymeric microparticles.

14. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 13~~ in which flocculation is effected by employing a water soluble or water-swellable polymer and a charged microparticulate material.

15. (currently amended) A process according to ~~any one of claims~~ claim 1 ~~to 14~~ in which flocculation is effected by introducing an anionic microparticle material into the mixture and then reflocculating by adding a substantially non-ionic polymer.

16. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 15~~ in which flocculation is effected by introducing a cationic polymer into the mixture and then reflocculating by adding an anionic microparticulate material.

17. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 16~~ in which flocculation is effected by introducing a cationic polymer into the mixture and then reflocculating by adding an anionic polymer.

18. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 17~~ in which flocculation is effected by introducing an anionic polymer into the mixture and then reflocculating by adding a cationic polymer.

19. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 18~~ in which the solid-by product material comprises lignin and analogous materials.

20. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 19~~ in which the fermentation product is selected from the group consisting of ethanol, glycerol, acetone, n-butanol, butanediol, isopropanol, butyric acid, methane, citric acid, fumaric acid, lactic acid, propionic acid, succinic acid, itaconic acid, acetic acid, acetaldehyde, 3-hydroxypropionic acid, glyconic acid, tartaric acid and amino acids wherein the amino acids are selected from the group consisting of ~~such as~~ L-glutaric acid, L-lysine, L-aspartic acid, L-tryptophan , L-arylglycines ~~or~~ and salts of any of these acids.

21. (currently amended): A process according to ~~any of claims~~ claim 1 ~~to 20~~ in which the fermentation product is separated from the broth by passing the broth comprising the fermentation product into a distillation stage, where the fermentation compound is collected as a distillate and the residue 'still bottoms' is removed.

22. (currently amended): A process according to ~~any one of claims~~ claim 1 ~~to 21~~ in which the fermentation product is separated from the broth by passing the broth comprising the fermentation product into a concentration stage, in which the fermentation compound is collected in the concentrate and extracted by at least one means selected from the group consisting of ion exchange, solvent extraction and electrodialysis.